

4w

UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/625,843

07/24/2003

Michiru Senda

492322013500

8933

25227

7590

02/08/2005

MORRISON & FOERSTER LLP
 1650 TYSONS BOULEVARD
 SUITE 300
 MCLEAN, VA 22102

EXAMINER

PATEL, NITIN

ART UNIT

PAPER NUMBER

2673

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,843

Applicant(s)

SENDA ET AL.

Examiner

Nitin Patel

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-10 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Claims 2,5 is objected to because of the following informalities: Typographical error on page 12 lines 11 should read, "shift register" and on page 13 lines 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Proebsting (U.S. Patent No. 5,952,948).

As per claim 1, Proebsting teaches a display device having a plurality of pixels (in Fig.1 element 112), each of the pixels comprising: a serial-to-parallel converter (In fig.1 element 102 includes a serial to parallel In col.1 lines 42-46) converting a serial digital image signal supplied serially to the display device to a parallel digital image signal (in col.1 lines 45-47); a DA (in col.1 lines 48-52) converter converting the parallel digital image signal to an analog image signal; and a pixel electrode configured to receive the analog image signal (in col.1 lines 55-58 capacitor connected to pixel receive analog signal).

Allowable Subject Matter

4. Claims 2,3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to teach or suggest the serial-to-parallel converter having a drain signal line supplied with the serial digital image signal, a plurality of pixel selecting transistors connected to the drain signal line and a plurality of shift registers, each of the shift registers supplying a sampling pulse to a gate of the corresponding pixel selecting transistor for sampling the serial digital image signal at a predetermined timing as claimed in claim 2.

The prior art fails to teach or suggest DA converter having a plurality of capacitor electrodes coupled with the pixel electrode, each of the capacitance electrodes having a weighted capacitance ratio to couple with the pixel electrode, a clock supplying portion supplying a periodic clock signal to the capacitor electrodes in response to the parallel digital image signal as claimed in claim 4

5. Claims 5-10 are allowed.

The prior art fails to teach or suggest a display device having a drain signal line configured to receive a serial digital image signal serially supplied to the display device; a plurality of pixel selecting transistors connected to the drain signal line and selecting a pixel of the display device; a plurality of shift registers, each of the shift registers supplying a sampling pulse to a gate of the corresponding pixel selecting transistor for sampling the serial digital image signal at a predetermined timing to produce a parallel

Art Unit: 2673

digital image signal; a data retaining portion retaining the parallel digital image signal converted from the serial digital image signal; a pixel electrode of the pixel; a plurality of capacitor electrodes coupled with the pixel electrode, each of the capacitance electrodes having a weighted capacitance ratio to couple with the pixel electrode; and a clock supplying portion supplying a periodic clock signal to the capacitor electrodes in response to the parallel digital image signal retained in the data retaining portion as claimed in claim 5.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 703-308-7024. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H Shalwala can be reached on 703-305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP


Amare Mengistu
Primary Examiner